

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

1. (Withdrawn) A docking system for connecting a portable communication device to a further signal transmission line, said portable communication device having an externally radiative antenna, said system comprising:
 - a shield for restricting at least a portion of any radiation emanating from said externally radiative antenna of said portable communication device; and
 - a coupling probe mounted adjacent to said shield for radiatively coupling between said externally radiative antenna of said portable communication device and said further signal transmission line via radio frequency energy therebetween.
2. (Withdrawn) The docking system as recited in claim 1, wherein said shield is comprised of an electrically conductive material.

Serial No.: 09/634,140 Amendment of Claims
Art Unit: 2744

3. (Withdrawn) The docking system as recited in claim 1, wherein said shield defines a focal area station for receipt and transmission of a radio frequency signal, when a communication device is placed within said focal area.
4. (Withdrawn) The docking system as recited in claim 3, wherein said focal area stations may be selected from the group consisting of a desk, a room in a building, or a tray in a vehicle.
5. (Withdrawn) The docking system as recited in claim 1, wherein said further signal transmission line comprises a further antenna located at a location remote from said shield.
6. (Withdrawn) The docking system as recited in claim 1, wherein said further signal transmission line comprises a distribution network to permit communication of said communication device with other electrical communication devices.

Serial No.: 09/634,140 Amendment of Claims
Art Unit: 2744

7. (Withdrawn) The docking system as recited in claim 5, wherein said transmission line has a control unit therein, said control unit being arranged to permit monitoring and regulation of signals being transmitted through said transmission line.
8. (Withdrawn) The docking system as recited in claim 7, wherein said control unit comprises a computer arranged to monitor time or use of said docking system.
9. (Withdrawn) The docking system as recited in claim 3, wherein said shield and said probe are spaced apart from one another by a dielectric material.
10. (Withdrawn) The docking system as recited in claim 9, wherein said shield, said probe and said dielectric material are flexible.

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

11. (Withdrawn) The docking system as recited in claim 6, wherein a plurality of said communication devices are arranged in a simultaneous connection to said transmission line.

12. (Withdrawn) A method of coupling a portable communication device having an externally radiative antenna, to a signal transmission line having a further distribution system and/or remote antenna thereon, for the purpose of effecting radio signal communication therebetween, said method comprising the steps of:
 - arranging a radiation shield in juxtaposition with at least a portion of said radiative antenna of said portable communication device;
 - mounting a coupling probe adjacent said shield and in communication with said signal transmission line; and
 - placing said externally radiative antenna of said portable communication device communicatively adjacent said shield so as to permit radiative communication between said externally radiative

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

antenna of said communication device and said signal transmission line via said coupling probe; and

arranging said shield in a generally planar work surface so as to restrict the propagation of at least a portion of the radiation emanating from said communication device.

13. (Withdrawn) The method of coupling said portable communication device to said signal transmission line, as recited in claim 12, including the step of:

attaching a control unit to said transmission line to permit regulation of electric signals therethrough.

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

14. (Withdrawn) The method of coupling said portable communication device to said signal transmission line, as recited in claim 13, including the step of:

adding a further communication device in juxtaposition with a further probe, so as to permit multiple simultaneous use of said transmission line and/or remote antenna therewith.

15. (Withdrawn) The method of coupling said portable communication device to said signal transmission line, as recited in claim 13, including the step of:

billing any users of said distribution system/remote antenna by monitoring and tabulating any signals received by and sent through said control unit.

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

16. (Currently Amended) A method of communicating between a personal communication device and a further circuit, comprising the steps
~~of arranging of:~~ arranging a receiving support for receiving and supporting said personal communications device, said personal communication device having an externally radiative first antenna;

arranging a radiative coupling ~~probe~~ antenna at said receiving support and in a spaced-apart and offset relationship with respect to said radiative first antenna of a personal communication device on said support, to provide a capacitive coupling arrangement with respect to said radiative first antenna;

connecting said radiative coupling ~~probe~~ antenna to said further circuit for communication with said first antenna; and

energizing said personal communication device so as to receive and/or send an electronic signal thereby, through radiative communication between said first antenna and said further circuit.

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

17. (Currently Amended) The method of communicating between a personal communication device and a further circuit, as recited in claim 16, including the step of:

arranging said coupling ~~probe~~ antenna in a separate housing.

18. (Currently Amended) The method of communicating between a personal communication device and a further circuit, as recited in claim 16, including the step of:

fabricating said coupling ~~probe~~ antenna as a generally flat electrical conductor.

19. (Currently Amended) The method of communicating between a personal communication device and a further circuit, as recited in claim 16, including the step of:

shielding said coupling ~~probe~~ antenna within said housing, while permitting radio frequency communication between said first antenna and said coupling ~~probe~~ antenna.

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

20. (Currently Amended) The method of communicating between a personal communication device and a further circuit, as recited in claim 16, including the step of:

attaching a second antenna to said further circuit, to permit radio frequency communication between said personal communication device and said second antenna via said coupling ~~probe~~ antenna.

21. (Original) The method of communicating between a personal communication device and a further circuit, as recited in claim 16, wherein said receiving support comprises an article of furniture.

22. (Original) The method of communicating between a personal communication device and a further circuit, as recited in claim 21, wherein said article of furniture is selected from the group comprised of: an airplane seat tray, a desk, a chair, a table and an automobile.

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

23.(Cancelled) A docking system for providing hands-free operation of a personal communication device, comprising:

 a placement device to position said personal communication device with respect to said docking system;

 input and output circuitry having a broad bandwidth capable of conducting rf energy on a plurality of operating frequency bands from an external transmission line to said personal communication device.

24.(Cancelled) The docking system as recited in claim 23, wherein said plurality of operating frequency bands are harmonically related.

25.(Cancelled) The docking system as recited in claim 23, wherein said plurality of operating frequency bands are placed within a range of frequencies from the VHF region to the microwave region.

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

26. (Currently Amended) A method for the permitting use of and for the monitoring of communication of a personal communication device arranged within an rf resistant structure, said method including the use of a further circuit within said rf resistant structure, said personal communication device having an externally radiative antenna, said method comprising the steps of:

arranging at least one first ungrounded capacitive coupling ~~plate~~ ~~coupling probe~~ antenna in said rf resistant structure so as to be in a spaced apart relationship with respect to said externally radiative antenna of said personal communication device to permit radio frequency communication therebetween;

connecting said coupling ~~probe~~ antenna in said rf resistant structure to said further circuit in said rf resistant structure;

connecting a signal transmission monitoring computer to said further circuit for collecting personal communication device user information;

connecting said further circuit to a second antenna outside of said rf resistant structure;

Serial No.: 09/634,140 Amendment of Claims
Art Unit: 2744

arranging a personal communication device within said rf resistant structure so that said externally radiative antenna of said personal communication device is spaced apart from said coupling ~~probe~~ antenna within said rf structure;

energizing said personal communication device to permit communication through said further circuit and said second antenna arranged outside of said rf resistant structure; and

monitoring use of said personal communication device within said rf resistant structure.

27. (Original) The method of improving the radio frequency communication of a personal communication device using a further circuit therewith, as recited in claim 26, including the steps of:

billing a user of said personal communication device for costs of service of said personal communication device while said personal communication device is utilized within said rf resistant structure.

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

28. (Currently Amended) The method of improving the radio frequency communication of a personal communication device using a further circuit therewith, as recited in claim 26, including the step of:

connecting a second coupling ~~probe~~ antenna within said rf resistant structure with said further circuit in said rf resistant structure, to permit said personal communication device to improve communication thereof with said second antenna outside of said rf resistant structure.

29.(Original) The method of improving the radio frequency communication of a personal communication device using a further circuit therewith, as recited in claim 26, wherein said structure is a building.

30. (Original) The method of improving the radio frequency communication of a personal communication device using a further circuit therewith, as recited in claim 26, wherein said rf resistant structure is an airplane.

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

31. (Original) The method of improving the radio frequency communication of a personal communication device using a further circuit therewith, as recited in claim 26, wherein said rf resistant structure is an article of furniture.

32. (Original) The method of improving the radio frequency communication of a personal communication device using a further circuit therewith, as recited in claim 26, wherein said rf resistant structure is an automobile.

33.(Currently Amended) A method of improving the communication of a personal communication device in an rf resistant structure by using a further circuit therewith, said personal communication device having an externally radiative antenna, said method comprising the steps of:

arranging an ungrounded coupling ~~plate~~coupling probe antenna within said structure so as to be in an offset relationship with respect to said externally radiative antenna of said personal communication device to permit radio frequency communication therebetween;

connecting said coupling ~~probe~~ antenna to a further circuit;

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

connecting a loudspeaker independent of said personal communication device, to said further circuit;

connecting said further circuit to a second antenna external of said structure; and

placing a personal communication device within said structure so that its externally radiative antenna is spaced apart from said coupling ~~probe~~ antenna; and

energizing said personal communication device to permit communication outside of said structure, through said second antenna.

34. (Original) The method of improving the radio frequency communication of a personal communication device using a further circuit therewith, as recited in claim 33, including the steps of

installing a battery in said personal communication device; and

charging said battery in said personal communication device while said personal communication device is arranged within said structure.

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

35. (Original) The method of improving the radio frequency communication of a personal communication device using a further circuit therewith, as recited in claim 33, wherein said personal communication device comprises a cellular telephone.

36.(Original) The method of improving the radio frequency communication of a personal communication device using a further circuit therewith, as recited in claim 35, including the step of:

operating said personal communication device at a frequency from the very high frequency region of the spectrum to the microwave region of the spectrum.

37. (Currently Amended) A method of communicating between a personal communication device and a further circuit of an automobile ~~or the like~~, to provide an improved range for said communication device:

supporting said personal communication device on a receiving support, said personal communication device having an externally radiative first antenna and a battery, said receiving support having a

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

charging pin to charge said battery, said receiving support having a connection for a loudspeaker arranged independent of said personal communication device;

placing a tuned coupling ~~probe~~ antenna at said receiving support in an offset and adjacent position with respect to said first antenna ~~when said personal communication device is supported on said receiving support~~ wherein said coupling ~~probe~~ antenna is physically positioned between ~~a portion of a wall of~~ said receiving support and said first antenna;

connecting said tuned coupling ~~probe~~ antenna to said further circuit by a coaxial cable connector to permit communication between said personal communication device and said further circuit;

energizing said personal communication device so as to receive and/or send an electronic signal through said coaxial cable to a second external antenna comprising said further circuit.

38.(Original) The method as recited in claim 37, wherein said receiving support has a conductive shield thereon.

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

39.(Currently Amended) A docking system for a personal communication device for connection of said device to a further circuit of an automobile ~~or the like~~, to provide an improved range for said communication device comprising:

a receiving support for receiving and supporting said personal communication device wherein said personal communication device has an externally radiative first antenna and a battery, said receiving support having a charging pin to charge said battery and said receiving support having a connection to a loudspeaker arranged independent of said personal communication device;

a tuned coupling ~~probe~~ antenna arranged at said receiving support in an offset and adjacent position with respect to said first antenna when said personal communication device is supported on said receiving support and, wherein said coupling ~~probe~~ antenna is physically positioned between ~~a portion of a wall of~~ said receiving support and said first antenna;

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

said tuned coupling ~~probe~~ antenna being connected to said further circuit by a coaxial cable connector to permit communication between said personal communication device and said further circuit, wherein said personal communication device may be energized so as to receive and/or send an electronic signal through said coaxial cable to a second external antenna comprising said further circuit.

40. (Cancelled) The method as recited in claim 39, wherein said receiving support has a conductive shield thereon.

41. (New Claim) A method of providing wireless communication to a personal communication device in an rf restricted environment, said personal communication device having a radiative antenna, said method comprising;

providing a personal communication device with a radiative antenna;

providing a first coupler antenna within said rf restricted environment;

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

connecting said first coupler antenna to a second antenna associated with and arranged outside of said rf restricted environment;

connecting said first coupler antenna to a second antenna mounted on the outside of said rf restricted environment through a computer controlled circuit arranged therebetween;

wirelessly connecting said first coupler antenna with said radiative antenna of said personal communication device within said rf restricted environment;

monitoring said wireless connection between said coupler antenna and said radiative antenna of said personal communication device; and

billing for use of said personal communication device within said rf restricted environment.

42. (New Claim) The method as recited in claim 41, wherein said personal communication device is a cellular telephone.

43. (New Claim) The method as recited in claim 41, wherein said personal communication device is a laptop computer.

Serial No.: 09/634,140 Amendment of Claims

Art Unit: 2744

44.(New Claim) The method as recited in claim 41, wherein said rf restricted environment is an airplane.

Claims 1- 15 stand withdrawn. Claims 23 through 25 and claim 40 are cancelled without prejudice. New Claims 41, 42, 43 and 44 are entered in place of those cancelled claims. Please renumber and re-depend the remaining claims accordingly.